

ABSTRACT OF THE DISCLOSURE

A back-up quantity of a "first" gas is supplied temporarily to maintain the level of
5 production of the first gas from a cryogenic separation of a gaseous mixture comprising
the first gas and at least one other gas in the event of reduction in the level of production
of said first gas from the separation. In the event of reduction in the level of production
of said first gas from the separation, liquefied first gas inventory is withdrawn from the or
at least one of said cryogenic distillation systems and vaporised to produce said back-up
10 quantity of first gas. The invention has particular application to the production of gaseous
oxygen ("GOX") from the separation of air.